

We Claim:

1. A method for producing a protein in a host cell, comprising the step of culturing a host cell comprising a first nucleic acid encoding an isolated chaperonin binding domain associated with a second nucleic acid encoding the protein and a  
5 third nucleic acid encoding a chaperonin, under conditions suitable for expression of said first, said second and said third nucleic acid and wherein said chaperonin binding domain is capable of binding to said chaperonin.
- 10 2. The method of Claim 1 further comprising recovering said protein from said cell.
3. The method of Claim 1 wherein said nucleic acid encoding the chaperonin is naturally produced by the host cell.
- 15 4. The method of Claim 3 wherein said cell is grown under conditions that result in elevation of the levels of the naturally produced chaperonin.
5. The method of Claim 1 wherein said nucleic acid encoding the chaperonin is heterologous to the host cell.
- 20 6. The method of Claim 1 wherein said host cell is a bacterial cell.
7. The method of Claim 6 wherein said bacterial cell is a member of the family *Enterobacteriaceae*
- 25 8. The method of Claim 7 wherein said bacterial cell is *E.coli*.
9. The method of Claim 1 wherein the chaperonin binding domain has a sequence as shown in SEQ ID NO: 1 through SEQ ID NO: 38.
- 30 10. The method of Claim 1 wherein said chaperonin binding domain is obtainable from GroES and said chaperonin is the GroEL chaperonin.

11. The method of Claim 10 wherein the chaperonin binding domain comprises the amino acid sequence EVETKSAGGIVLTGSAAA or is a variation thereof capable of binding to GroEL chaperonin with an affinity of between about  $10^{-2}$  and  $10^{-8}$  Kd.

5 12. The method of Claim 1 wherein said first and said second nucleic acid encode a fusion protein.

13. The method of Claim 12 wherein said first and said second nucleic acid encode a fusion protein and are separated by an enzymatic cleavage site.

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14. The method of Claim 12 wherein said first and said second nucleic acid encode a fusion protein and are separated by a chemical cleavage site.

15. The method of Claim 1 wherein said protein is toxic to the host cell.

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16. The method of Claim 5 wherein said chaperonin heterologous to the host cell is under the control of an expression signal capable of overexpression said chaperonin.

17. An expression vector comprising a first nucleic acid encoding a chaperonin  
20 binding domain and a second nucleic acid encoding a protein.

18. The expression vector of Claim 17 wherein the chaperonin binding domain has a sequence as shown in SEQ ID NO: 1 through SEQ ID NO: 38

25 19. The expression vector of Claim 18 wherein the chaperonin binding domain is obtainable from GroES.

20. The expression vector of Claim 18 wherein the chaperonin binding domain comprises the amino acid sequence EVETKSAGGIVLTGSAAA or a variation thereof  
30 capable of binding to GroEL chaperonin with an affinity of between about  $10^{-2}$  and  $10^{-8}$  Kd.

21. A host cell containing the expression vector of Claim 17.

22. The host cell of Claim 21 wherein the host cell is a member of the family *Enterobacteriaceae*.

23. The host cell of Claim 22 wherein the host cell is *E.coli*.

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